



UW Extension Outreach: Transcending borders the way of the CHEATGRASS

SITUATION

Cheatgrass (*Bromus tectorum* L.), or downy brome, is a cool-season, invasive annual grass introduced to the United States from Eurasia. Some people suggest it is the most common plant in the western United States, persisting on almost 99 million acres of rangeland. Cheatgrass has been credited for altering wildfire regimes and impacting plant species richness, which affects wildlife habitat and livestock forage quality and quantity.

Organized efforts to discuss and manage cheatgrass have occurred for years throughout the west and more recently in Wyoming.

A number of studies undertook to understand the ecological effects of cheatgrass. A 2009 study throughout Wyoming and Colorado took a different approach – To what degree do land managers, ranchers, and natural resource professionals perceive cheatgrass to be a problem in their areas? The study suggested a need to teach land managers

how to identify the invasive grass, its potential negative effects, and information about different control methods.

The Rocky Mountain Cheatgrass Management Project (RMCMP), a partnership between the University of Wyoming and Colorado State University, hit the ground running with extension programming in 2013 with outreach efforts to address the needs of land managers throughout the two states. The year's accomplishments included offering workshops in Pinedale and Douglas and in Meeker, Colorado. The workshops addressed several of the needs identified in the 2009 study.

The first half of each workshop was classroom-based. Participants were introduced to the 'Cheatgrass Management Decision Framework' (see chart page 21) presented in the *Cheatgrass Management Handbook: Managing an invasive annual grass in the Rocky Mountain region* (the handbook is online at <http://wp.natsci.colostate.edu/rmcmp/>). The second half of each workshop was field-based and tailored to meet the needs of local participants.



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The Pinedale field tour highlighted and discussed the Sublette County Invasive Species Taskforce’s efforts to control cheatgrass. Their efforts closely followed the Cheatgrass Decision Framework presented in the handbook. The field component in Douglas was hands-on and focused on monitoring methods and how to collect data. The Meeker field tour included three stops at research trials, including two at replicated oil and gas well pads.

Each workshop had the same four presenters. There were 22 participants from Wyoming, Idaho, and Colorado at the Pinedale workshop, and a guest speaker from the taskforce. Forty-nine participated from eastern Wyoming and Nebraska at the Douglas workshop, including agency professionals and ranchers. Thirty people attended the workshop in Meeker, and two guest speakers from Colorado State University Extension, and the Colorado Parks and Wildlife.

IMPACTS

A survey assessed pre- and post-workshop cheatgrass knowledge and what changes participants anticipated making in their management of invasive species, specifically cheatgrass, as a result of the workshop.

Participant knowledge increased for all key points in the pre- and post-self-assessment of those who completed and submitted the workshop evaluation. The three key

points in which participants reported their knowledge increased the most on a scale of 1 to 5 (1 = low and 5 = high) were:

- **Knowledge of the current options for chemical control:** Pre-workshop average knowledge 2.77; post-workshop average knowledge 4.21
- **Familiarity with selecting an appropriate monitoring technique for the question of interest:** Pre-workshop average knowledge 2.72; post-workshop average knowledge 4.08
- **Familiarity with ways to prioritize locations for cheatgrass management actions:** Pre-workshop average knowledge 2.78; post-workshop average knowledge 4.12

Respondents reported they could apply the information they learned to the area they manage (average 4.34 on a scale of 1 to 5, with 1 being strongly disagree to 5 being strongly agree). Additionally, they reported more confidence in their ability to identify cheatgrass and to develop a management strategy (average 4.29 on a scale of 1 to 5, with 1 being strongly disagree to 5 being strongly agree).

Respondents were asked what they would do differently when they manage invasive species, specifically cheatgrass.

- Prioritize location, and deciding which management plan to use
- Evaluate stage of invasion and appropriate response. Build monitoring into management
- Consider evaluating/surveying human dimensions related to management

Workshop participants noted a number of strengths of the workshop including:

- Field work was helpful in determining cheatgrass infestation levels
- Multidisciplinary approach
- Multiple speakers, short and pertinent presentations. Diverse audience. Good to see collaboration between CSU and UW.
- The field trip was great. I overheard many discussions about identification of plants ...

Participants were provided an electronic and/or hard copy of the *Cheatgrass Management Handbook: Managing an invasive annual grass in the Rocky Mountain region* they can use to learn more about cheatgrass and to find a significant amount of the information they learned during the workshop.

Visit <http://wp.natsci.colostate.edu/rmcmp/> to learn more about the RMCMP.

